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PENSOFT

Gloronia venusta (Thomas, 1912) (Didelphidae) reaches the Atlantic! New records in French Guiana, with notes on behaviour

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Abstract. We report observations of *Gloronia venusta* Thomas, 1912, Bushy-tailed Opossum, from coastal French Guiana, expanding the distribution of this species 300 km north of its previously known range.

Keywords. Amazonia, biogeography, distribution, marsupial, social interactions

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Introduction

Gloronia venusta Thomas, 1912 (Didelphidae) is an infrequently observed small marsupial that has previously been reported from widely scattered localities in Colombia, Ecuador, Peru, Bolivia, French Guiana, and Brazil (Barkley 2007; Rossi et al. 2010; Ardente et al. 2013; Solari and Martins 2016; Sant and Catzeflis 2017; Montenegro and Restrepo 2018). Here, we report new sightings from coastal French Guiana, extending the known distribution of this species almost 300 km to the north (Fig. 1).

Methods

The new sightings were made in July and August 2023 in a mixed forest (Gond et al. 2011) on the sedimentary coastal plain (Guitet et al. 2013) of north-western French Guiana about 20 km from the Atlantic Ocean (05.5566°N, 053.9378°W; 8 m above sea level). This forested area is managed by the NGO "Association pour la Découverte de la Nature en Guyane" (ADNG), which is dedicated to education awareness. Although not benefiting from official protected-area status, the activity of the ADNG effectively protects the forest from timber extraction and hunting.

Results

New records. FRENCH GUIANA • Saint Laurent du Maroni; 05.5561, −053.9374; 8 m alt.; 11.VII.2023, 4.VIII.2023, 5.VIII.2023, 8.VIII.2023; active, on trees; P. Alexandre et al., obs.; mixed forest of the sedimentary coastal plain.

July 11, 2023. During a night walk, at 8:13 pm, one of us (PA) with two colleagues heard some noise in a tree above them. We observed two animals for about 30 s at about 5–10 m above the ground. The animals were apparently involved in an aggressive interaction and moving rapidly, running from branch to branch, and vocalizing loudly. One of them suddenly fell but caught onto a branch less than 1 m above the ground right next to us. It immediately climbed back up to where the other was waiting, after which they chased each other just for a few more seconds before the one that fell escaped and hid itself on a branch where we were able to take pictures (Fig. 2A).

August 4, 2023. Several weeks later, on another night walk at the same locality, the two same colleagues saw two individuals separated by about 100 m. The first sighting was at 09:07 pm, when one individual was seen perched about 5 m above the ground on a tree trunk (Fig. 2B), where it remained stationary for about 1 min before running up and down the same trunk and then

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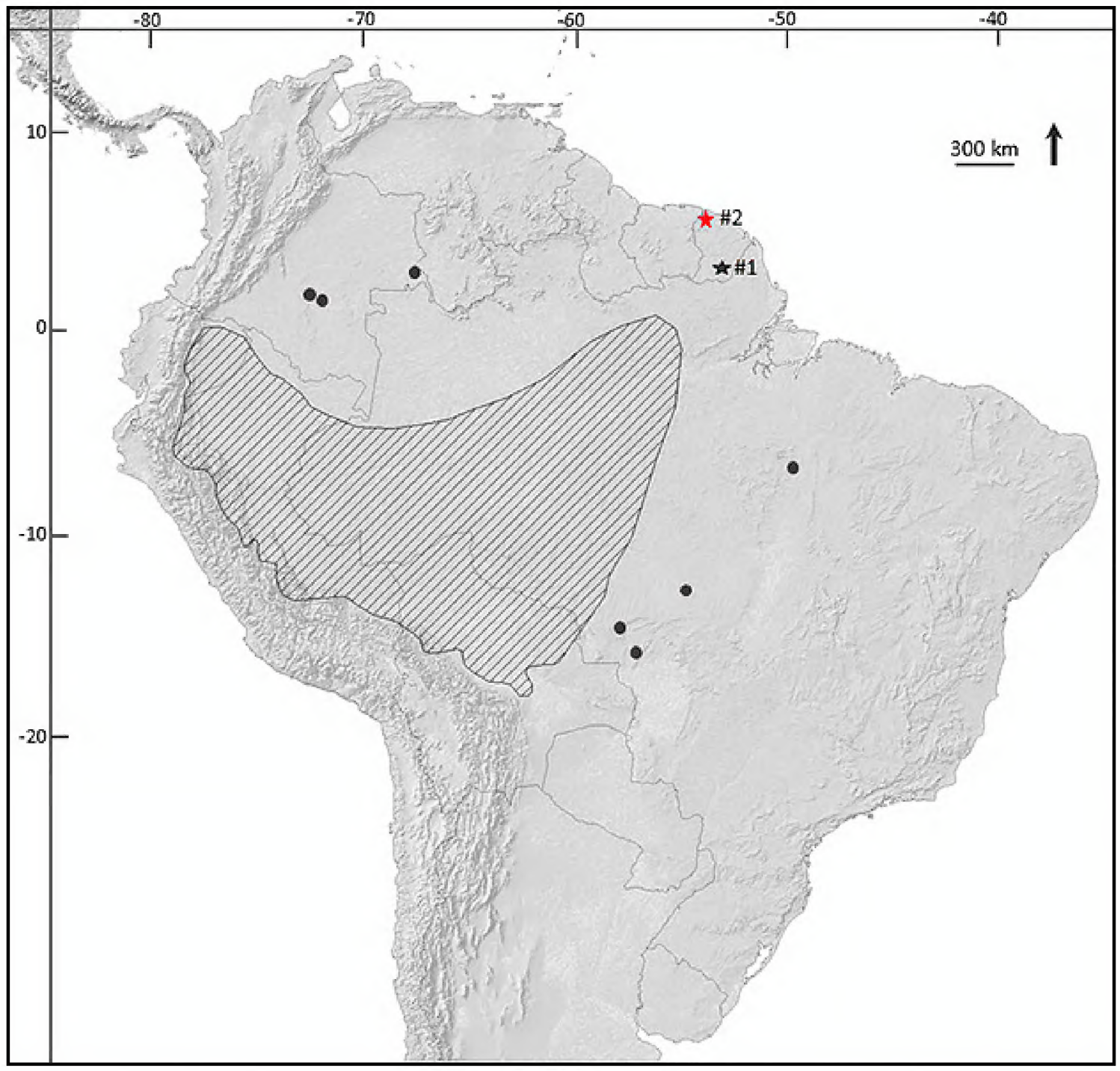

Figure 1. Recent records and distribution of *Glironia venusta*. The shaded area represents the last updated IUCN distribution (Solaro and Martin 2016). Extralimital dots are localities reported from eastern Brazil (Barkley 2007; Rossi et al. 2010; Ardente et al. 2013) and southern Colombia (Montenegro and Restrepo 2018; López-Arévalo et al. 2021; Mosquera-Guerra et al. 2022). The black star indicates the first record from French Guiana (Sant and Catzeflis 2018), and the red star indicates the new observations reported here.

crossing over the trail on a branch and disappearing. The second sighting was at 09:28 near a small watercourse; this individual was 5–10 m above the ground on a branch from which it rapidly climbed into the canopy and vanished. Unlike the first two individuals that we saw in July, which had grayish fur, these two individuals had distinctly brownish fur.

August 5, 2023. We returned the next night with a group of 10 persons and saw two individuals of *Glironia venusta* in almost the same places. The first individual was seen at 08:52 pm at 5–10 m on a vertical trunk. It then climbed up and down the tree for about 5 min, closely approaching us several times (Fig. 2C) before disappearing into the canopy. The second individual was seen near the watercourse where we saw it on August 4, on a branch 10–15 m above the ground at 09:23 pm; it rapidly climbed into the canopy and out of sight. Both individuals had brownish fur and resembled those seen on August 4; as noticed by PA (who was not present August 4) these individuals looked larger than those seen on July 11.

August 8, 2023. One individual with brownish fur was seen at 09:36 pm near the forest watercourse. It was on a branch, 5 m above the ground, and rapidly climbed into the canopy.

Identification. Although the photographs are not perfect, the unmistakable morphological traits they illustrate are clearly those of *G. venusta*. Our identification was confirmed by Robert S. Voss (American Museum of Natural History, New York) and Michelle Mercês (Museu Paraense Emílio Goeldi, Belem, Brazil).

Discussion

The sole previous record of *Glironia venusta* in French Guiana (Sant and Catzeflis 2018) (Fig. 2D) was made on the Mont Itoupé (830 m alt.) in high forest (Gond et al. 2011) on the southern synclinorium (Guitet et al. 2013). This previous record is about 300 km south of where our observations were made. Our new data confirm previous suggestions that the species is a habitat generalist, occurring in lowland Amazonian forests and in tropical dry forests in Bolivia and southwestern Brazil, and at elevations up to 1,500 m in the Andes (Voss 2022). The area were we observed *G. venusta* is not pristine, although logging and heavy hunting pressure is prevented due to the long-term presence of a camp dedicated to environmental awareness. Therefore, we

Figure 2. Sightings of *Glironia venusta* in French Guiana. **A.** On July 11, 2023. **B.** On August 4, 2023. **C.** On July 11, 2023. **D.** Sébastien Sant's photographs (first record 2017), used with permission. Photo credits: Corentin Bourges (A), Denis Poulet (B,C), Sébastien Sant (D).

confirm that *Glironia* can occur in disturbed forests as previously reported noticed in Para, Brazil (da Silveira et al. 2014) and Peru (Rushford and Glynn 2023).

To our knowledge, our observations of the social interactions in *G. venusta* are the first such for this species.

Records of *Glironia. venusta* are rare and unlikey, explained by arboreal behavior and low density (da Silveira et al. 2014). The paradoxical point is that one of us (PA) walked in this forest almost every night for six months without seeing any individuals before the sightings reported here in a three-week interval. More broadly, the French Guiana coastal plain has been extensively explored by scientists and naturalists for decades. *Glironia venusta* may occur at low densities, and this combined with its strictly nocturnal habits (Rushford and Glynn 2023) and a preference for the highest forest stratum, makes sightings unlikely.

As currently understood, the genus *Glironia* is monospecific. Sant and Catzeflis (2018) mentioned that the animal they saw was greyish and, and because the fur of this species is typically described as brownish (e.g. by Barkley 2007), they suggested that it might represent a new species. Although the individuals we sighted on July 11 also had grayish fur, the individuals observed several weeks later in August were larger and had definitively brownish pelage. We suggest that the grayish animals were subadults and that brownish ones were adults. Although Cant and Catzeflis's (2018) hypothesis of a new species cannot be refuted based on our observations, the absence of molecular sequence data from eastern Amazonian specimens is noteworthy (Voss 2022). Collected specimens accompanied by preserved tissues would help resolve the taxonomic status of populations so far removed from the collection localities of name-bearing types.

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Author Contributions

Investigation: PA. Methodology: PA. Writing – original draft: BdT. Writing – review and editing: PA; BdT.

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